

6 one or more solid state UV devices that are positioned in the tubing, in the  
7 region of the container that is shaped to join the tubing, or both, the UV devices  
8 providing UV radiation in a germicidal range to purify the flowing water, the UV  
9 devices turning on when water flows from the container and through the tubing; and  
10 a power supply that provides power to the purification module.

1 16. The purification module of claim 15 wherein the means for signaling is a  
2 water flow sensor.

1 17. The purification module of claim 15 wherein the means for signaling is a user-  
2 operated valve that the user opens to provide water flow.

1 18. The purification module of claim 17 wherein the valve is a push-pull valve  
2 positioned on a top of the container and water flow is initiated by opening the valve  
3 and upending the container.

1 19. The purification module of claim 15 wherein the means for signalling is a user-  
2 activated switch.

1 20. The purification module of claim 15 wherein the power supply includes one or  
2 more of batteries, fuel cells, capacitors, solar cells and windup or crank-type dynamos.

1 21. The purification module of claim 20 wherein the power supply includes solar  
2 cells that charge one or more of the batteries, fuel cells and capacitors.

1 22. The purification module of claim 15 further including a wearable pack for  
2 carrying the container and the wearable pack is made of photovoltaic material that  
3 supplies power to the UV devices.

1 23. The purification module of claim 22 wherein the wearable pack supplies power  
2 to charge one or more batteries, fuel cells, solar cells and capacitors that are included in  
3 the power supply.

1 24. The purification module of claim 15 wherein the path through the purification  
2 module includes a wider section to allow water to flow unimpeded past the UV devices.

1 25. The purification module of claim 24 wherein the path provided through the  
2 purification module is sized to provide UV radiation of at least  $25\text{mJ}/\text{cm}^2$  to all of the  
3 water flowing past the UV devices.

1 26. The purification module of claim 15 further including one or more filters to  
2 remove sediments from the fluid.

1 27. The purification module of claim 15 further including a plurality of UV solid  
2 state devices mounted in the walls of the container.

1 28. The purification module of claim 27 further including a user-activated switch to  
2 turn on the wall-mounted UV devices.

1 29. The purification module of claim 27 further including a switch that turns on the  
2 wall-mounted UV devices when the power supply has sufficient power.

1 30. The purification module of claim 22 wherein the container is integral with the  
2 wearable pack.

1 31. The purification module of claim 22 wherein the container is a water bottle.

1 32. A purification module including  
2 tubing for providing a path for the hydrating fluid the tubing including a first  
3 end through which water enters the tubing and a second end through which water exits  
4 the tubing;

5 a sensor positioned in the tubing for signaling when water is flowing into and  
6 through the tubing;

7 one or more solid state UV devices that are positioned in the tubing and  
8 provide UV radiation in a germicidal range to purify the flowing water, the UV  
9 devices turning on when the sensor indicates that water is flowing through the tubing  
10 and turning off when the sensor no longer indicates that water is flowing through the  
11 tubing; and

12 a power supply for supplying power to the UV devices.

1 33. The purification module of claim 32 wherein the power supply includes one or  
2 more of batteries, fuel cells, capacitors and solar cells.

1 34. The purification module of claim 33 wherein the power supply includes solar  
2 cells that charge one or more of the batteries, fuel cells and capacitors.

3 35. The purification module of claim 32 wherein the path through the purification  
4 module includes a wider section to allow water to flow unimpeded past the UV devices.

1 36. The purification module of claim 35 wherein the path provided through the  
2 purification module is sized to provide UV radiation of at least  $25 \text{ mJ/cm}^2$  to all of the  
3 water flowing past the UV devices.

1 37. The purification module of claim 32 further including one or more filters to  
2 remove sediments from the fluid.

1 38. A water filtration system including:  
2 one or more filters positioned for removing sediment from the water;  
3 tubing for providing a path for flowing water;  
4 a pump for introducing water to the tubing;  
5 a purification module including one or more solid state UV devices that are  
6 positioned in the tubing and provide UV radiation in a germicidal range to purify the

7 flowing water, the UV devices turning on when the pump introduces water to the  
8 tubing and turning off when water flow ceases; and  
9 a power supply for providing DC power to the UV devices.

1 39. The water filtration system of claim 39 wherein the power supply converts  
2 energy associated with the pumping action of the pump to DC power for use by the UV  
3 devices.

1 40. The water filtration system of claim 38 wherein the power supply includes one  
2 or more of batteries, fuel cells, capacitors, solar cells and windup or crank-type  
3 dynamos.

1 41. The water filtration system of claim 40 wherein the power supply includes solar  
2 cells that charge one or more of the batteries, fuel cells and capacitors.

1 42. The water filtration system of claim 38 wherein the path through the  
2 purification module includes a wider section to allow water to flow unimpeded past the  
3 UV devices.

1 43. The water filtration system of claim 42 wherein the path provided through the  
2 purification module is sized to provide UV radiation of at least  $25 \text{ mJ/cm}^2$  to all of the  
3 water flowing past the UV devices.